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Visualization and Imagined Interaction as Cognitive Interventions for Lowering Levels of Communication Apprehension

Kathleen A. Snyder

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Visualization and Imagined Interaction as Cognitive Interventions for Lowering Levels of Communication Apprehension

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BY

Kathleen A. Snyder

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Visualization and Imagined Interaction as Cognitive Interventions for Lowering Levels of Communication Apprehension

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Running head: INTERVENTIONS

Abstract

Communication apprehension is something with which many students and people in general are faced when forced into an involuntary communication situation. Various treatments have been tested for coping with it. Imagined interaction and visualization, two cognitive processes associated with intrapersonal communication, were investigated in this study as interventions for lowering communication apprehension levels in introductory public speaking courses. One-hundred and fifty college students enrolled in introductory speech courses at Eastern Illinois University served as subjects and were assigned to one of four groups: a control group, a script visualization group, a performance visualization group, and an imagined interaction group.

The Personal Report for Communication Apprehension (PRCA) was administered to all groups one week before informative speeches were to begin. One class period prior to the speeches, all groups except the control group were exposed to the appropriate treatment. The two visualization groups were asked to picture themselves giving a speech confidently and successfully, one while being guided by a script, the other by watching a video. Subjects exposed to imagined interaction were instructed to imagine supportive conversations with peers and to have positive self-conversations. Subjects completed another PRCA-24 after delivering their speeches. At the end of the semester, about two months after being introduced to the respective interventions, subjects completed a survey allowing them the opportunity to share their perceptions of the treatment they received.

Statistical results revealed that none of the interventions reduced levels of

apprehension to a significant degree. These results are incongruent with prior research and with the reports of these subjects. The qualitative data elicited from subjects revealed that a majority felt the interventions were helpful to a degree and were worth being introduced. Communication apprehension, because of its ubiquitous nature, is worth investigating in terms of coping strategies. Participants in this study indicated they feel that visualization and imagined interaction should be introduced in the classroom as such a means of coping.

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Visualization and Imagined Interaction as Cognitive Interventions for Lowering Levels of Communication Apprehension

Chapter One

Introduction

Communication apprehension, according to McCroskey and Payne (1986) is "an individual's level of fear or anxiety associated with either real or anticipated communication with another person or persons" (p. 65). Many individuals face it any time they are required to speak in a public, or otherwise uncomfortable situation. It can occur in dyads, groups, and in public speaking situations. Much research has been conducted relating to identifying varying dimensions of communication apprehensions (CA), as well as ways to overcome it. By reducing one's apprehension levels, one feels more confident in speaking situations, and as a result avoids them less. Scholars have addressed many different methods of coping, including imagined interactions and visualization.

Imagined interaction, or II, is a "process of cognition whereby actors imagine themselves in interaction with others," and such mental planning is often used as a form of rehearsal, according to Edwards, Honeycutt, and Zagacki (1988, pp. 24-25). It is also referred to as a "cognitive representation of conversation experienced as internal dialogues with significant others," however, internal conversation with oneself would also be included in the definition (Honeycutt et al., 1990, p. 1). Although II involves dialogue, it is similar to visualization because it too can be used to prepare mentally for a speaking situation. According to Ayers and Hopf (1992), visualization (VIS) involves asking speakers to imagine themselves

making an effective presentation. It also usually entails imagining a successful scenario that is read from a script or seen on a video (see Appendices A and B). Researchers have seen it as a means of reducing levels of apprehension, and have studied its effectiveness in the area.

The majority of research that has investigated CA and its relationship with visualization and imagined interactions has been done from a quantitative standpoint. While the focus of this study, too, will be to examine levels of apprehension prior to and post treatment, qualitative measures will be incorporated to elicit student perceptions of the treatments they receive. Statistical data combined with actual student responses should give a clearer understanding of how useful such intervention can be.

Literature Review

In order to determine the relationships among II, VIS, and CA, each concept must be explored. The pervasiveness of CA provides an opportunity for interventions such as II and VIS to be considered as possible treatments for lowering levels of it. Because CA is the reason for considering the use of VIS and II, it will be examined first beginning with a review of the PRCA-24, the measurement most often used in measuring levels of CA.

Communication Apprehension

Beatty and Andriate (1985) conducted a study to explore contributions of the Personal Report of Communication Apprehension (PRCA) in predicting public speaking anxiety in comparison to a general instrument of measurement. Ninety-two students who were enrolled in a public speaking course completed the PRCA-24 immediately before their speeches on three different occasions. Immediately after these same speeches they completed

Spielberger, Gorsuch, and Lushene's (1969) State-Trait Anxiety Inventory which served as the "general trait anxiety measure" (p.178).

Results showed that the PRCA was no better in predicting performance anxiety than the general trait anxiety measure for the first presentation. However, the PRCA predictions improved for the second round of speeches, and by the third round "the PRCA-24 was clearly superior" (Beatty and Andriate, 1985, p. 181). One could conclude, then, that because students did not know what to expect with their first speeches, a general trait indicator is more successful at prediction. As students become more familiar with the situation, "the specific trait will be more stable and their responses to specific trait measures will be more accurate" (p. 181). The PRCA-24 appears to be a reliable predictive instrument, although waiting until after a performance before administering it may prove more successful.

The validity of the PRCA was also demonstrated by McCroskey, Beatty, Kearney, and Plax (1985) in response to criticism about content validity. The PRCA-24 measures apprehension levels in the four contexts of public speaking, small group communication, speaking in meetings, and dyadic communication. McCroskey et al. (1985) wanted to prove that, although the instrument clearly represents these contexts, it also reflects CA across other communication contexts.

Three-hundred eleven students enrolled in an introductory communication course completed the PRCA-24. McCroskey et al. (1985) correlated these scores with scores on a "predispositional measure of communication apprehension concerning a generalized communication

context" which included measurements of assertiveness (p. 167). The correlations revealed that the content items in the PRCA-24 are valid and are tapping into generalized areas of communication not specifically accounted for on the instrument. Reliability seems enhanced because of the inclusiveness of the items on the instrument.

Levine and McCroskey's (1990) latest proof that the PRCA-24 is a valid measurement of CA is a study comparing it to three rival measurements. A total of 8879 subjects completed the PRCA-24. Comparisons were made between it and a Guttman simplex model; a linear, unidimensional model; and a second-order factor model in order to find the underlying model for the PRCA-24. The measurement model underlying the PRCA-24 was most similar to the second-order factor model, which was internally consistent and parallel in its measurement of each distinct variable (CA in groups, meetings, dyads, and public speaking). It was also found that the PRCA-24 was as effective as the other models in terms of context-specific subscales and factor structures, but even more consistent upon replication. Levine and McCroskey (1990) stated that "careful measurement work is a necessary prerequisite for valid and useful results" and added further support to the reliability of the measurement model of the PRCA-24 (p.71).

Given the validity of the instrument, the PRCA-24 can be used to analyze a variety of effects of CA. McCroskey and Payne (1986) conducted a preliminary study in which they investigated the relationship between CA and the success of college students. They hypothesized that students with high CA would have lower grade point averages than those with low CA,

and that the drop-out rate would be larger for students with high CA than students with low CA. McCroskey's PRCA-24 was administered to 1884 incoming freshmen whose responses classified them as having high, moderate, or low CA. Information regarding grade point averages and drop-out rates were disclosed to the researchers by the University Office of Admissions and Records at the end of each semester over a two year period (pp. 65-66).

Results of the study supported the hypotheses that the drop-out rate was higher for students with high CA, while their GPA was lower. Students with moderate apprehension levels "fall in between" on both GPA and dropping out of school (McCroskey and Payne, 1986, p. 67). In other words, high CAs are more likely to do poorly in school, in some cases to the extent of quitting. Their moderate and low CA peers fare better in completing their degrees with higher marks.

To further reinforce the previously mentioned study, McCroskey, Booth-Butterfield, and Payne (1989) continued to study CA and academic record for another two years. The records of the same group of students proceeded to be checked after every semester for drop-out status and GPA status. Results reiterated the findings of the previous study and further indicated that "higher CA is always implicated with poorer outcomes of academic achievement" (McCroskey et al., 1989, p. 104). The implications of these studies could make a strong argument for incorporating coping strategies into presentation type classes, especially those that are required.

Beatty (1987) added further support to the notion that individuals who

have higher levels of CA seek to avoid communication if possible. Two studies were conducted and compared to examine avoidance, withdrawal, and anxiety. Subjects for the first study were 63 speech communication students who were given a choice among public speaking, writing an essay, or taking a test as way of demonstrating comprehension of the course content. The PRCA-24 was administered to determine apprehension levels. As expected, high CAs sought to avoid public speaking, while low CAs opted for it. Some moderate CAs chose public speaking, while others did not.

The second study conducted by Beatty (1987) was similar to the first with the addition of an informative speech that was required to be delivered by 51 new subjects. As Beatty (1987) states, "The results of study two suggest that apprehensive responses to public speaking can be predicted from participants' CA level" (p. 212). Subjects who score extremely high on the PRCA-24 tend to avoid or withdraw from a communication situation if given the opportunity, but if they are forced to speak they experience and report clear anxiety.

Neer (1990) investigated specific factors contributing to CA within the classroom. He hypothesized that if students were better acquainted with each other, if class was less formal, if conspicuousness was decreased, and if ambiguity in class was reduced, that lower CA would result. Subjects were 206 students enrolled in a basic communication theory class. Neer's (1987) CAPS survey, which is similar to the PRCA in that it indicates CA, was administered to reveal CA levels. The factors of acquaintance level,

formality, conspicuousness, and ambiguity reduction were defined and operationalized.

The findings indicated support of the hypotheses in that the more acquainted students were with one another, the less apprehension they felt. Decreased ambiguity, less formality, and reduced conspicuousness also resulted in lower levels of apprehension, but more important to note is that when the situational factors were combined, levels of anxiety decreased most drastically. The implications of this are significant for instructors interested in creating a less stressful learning environment. This study is also important in its mention of ambiguity, which can be decreased by mental preparation, as will be noted later.

A study conducted by Wheeless and Williamson (1992) further probed CA in the context of interaction and how to allow participants to feel more comfortable. Specifically, the researchers wanted to ascertain the connection between uncertainty and CA in initial interactions. One-hundred sixty-eight college students enrolled in different classes were asked to participate in one of three groups, in which they were paired with another student they did not know. Different questionnaires, including the PRCA-24, were distributed at various times according to group number, but for all three groups, each dyad interacted for a total of 16 minutes. Everyone completed the same posttests.

Results indicated that in the second half of the interaction time, apprehension was reduced, lending support to the theory that a relationship between uncertainty and CA does exist. Also, "information-seeking not only reduced uncertainty but also state-communication apprehension" (Wheeless

and Williamson, 1992, p. 258).

These studies illustrate that CA can be experienced at different levels. Individuals with low CA may experience a small amount of discomfort in some contexts, whereas individuals with high CA may suffer much more. As McCroskey and Payne (1986) suggest, high CAs may even drop out of school. Because such apprehension has potentially negative results, ways to cope with it must be identified and introduced to people who experience it. Internal processes, or forms of intrapersonal communication, may help by focusing on altering perceptions of situations or attitudes about apprehension.

Intrapersonal Communication

In Mind, Self, and Society, Mead (1934) first suggested the importance of intrapersonal communication. He discussed internal conversation and how these dialogues could involve taking on the role of others to see oneself as others do, or to become a "me" object rather than an "I" subject. His "I" and "me" dimensions of the self are extremely suggestive of the self-talk that occurs in imagined interaction, as well (p. 209). Further, he recognized the relationship between the mind and an individual's responses within the environment. For example, Mead (1934) discusses how the central nervous system works with attitudes and the psyche and states that "the organism is in a sense responsible for its environment" (p. 130).

Mead (1934) goes on to say that humans have the ability to attempt to control the goings on in their environment and that "inner individual experience" can help in doing so (p. 133). Mead would then support CAs being more in control of their apprehension levels in an anxiety-producing

communication environment. The inner individual experiences to which Mead (1934) refers are cognitive processes. Therefore, visualization and II seem appropriate interventions for CA, which is merely a response to a particular environment.

Fremouw and Scott (1979) also realized that possible treatment for CA could stem from cognitive processes. What the researchers term as "cognitive restructuring" is actually a form of self-talk, or an imagined interaction with oneself (p. 129). The first step of cognitive restructuring is replacing negative statements that CAs make about a speaking situation with positive ones. Fremouw and Scott (1979) give an example of a high CA replacing "I'm going to sound stupid" with "I've done my homework on my topic" (p. 130).

For restructuring, the researchers recommend that groups of four or five subjects meet with a trainer for five to eight one hour weekly meetings. They are then informed that CA is a learned reaction which most people can modify by learning new skills. Fremouw and Scott (1979) further explain that identifying negative statements and constructing coping statements such as "speak slowly" or "it's only a small group" are the primary focus of the meetings, along with practicing the new skills. It seems apparent that when discussing a future speaking situation with oneself or with others, selecting the proper phrasing, which imagined interaction aids in doing, can help ease apprehension.

Heun and Heun (1989) outlined various intrapersonal processes that can occur for a speaker throughout an entire speech-giving experience. For example, before the speaking event, Heun and Heun (1989) state that "the

speaker is intrapersonally calling up and processing his/her expectations for the speaking experience" (p. 495). It is at this point, the researchers believe, that CA begins. Based on previous experiences, a negative, neutral, or positive perception of the upcoming speech is probably already present, but careful preparation based on cognitive choices increases confidence. VIS and II are possible interventions to accomplish just that.

Intrapersonal communication, or self-talk, also continues during and after a speaking situation. Heun and Heun (1989) described the constant process of accepting and adjusting to audience feedback. This and continuous self-feedback, such as "stress that point" or "slow down" allow an opportunity for the individual to realize pre-conceived success by making certain that the appropriate behaviors are executed. After the speech, assessment takes place. IIs are used to review the situation and what was said, while VIS can allow the speaker to imagine what the audience saw. Such assessment can be used as a reference for future situations.

Rehearsal and self-talk seem to occur more within high CAs than moderate or low CAs, according to Buhr, Pryor, and Sullivan (1991), who wanted to explore further the "cognitive-affective relationship" between positive thinking and coping with speech anxiety (p. 305). Fifty-eight speech communication students were told that they would be given 20 minutes to prepare an impromptu speech, and then they would deliver it to an audience and a video camera. After leaving for three minutes, the experimenter returned and asked students to list all the thoughts they had experienced since being given the assignment. PRCA-24's were then administered.

Results showed that high CAs generally listed negative speech-related thoughts, such as "Please, dear God, help me through this" or "I don't like this at all" (p. 307). Moderate and low CAs expressed more neutral and positive speech related comments such as "I'm hungry" or "Impromptu speeches are easy" (p. 307). More generally, it was concluded that high CAs tend to be more emotional in their cognitions, while lower CAs focus more on the task at hand. Clearly, this study is consistent with a multitude of others in confirming a direct connection between cognitive processes and CA.

Crockett (1988) also recognized that attitudes about certain things can be affected through cognitions and describes "affective orientation" as a "positive or negative inclination toward some object or situation" (p. 30). For CAs, this would likely be a negative inclination toward a speaking situation. Crockett (1988) further discusses how an affective orientation can be effected by various cognitions. Interrupting negative thoughts is one example he mentions, along with processing in terms of identification with familiar circumstances. Though stated differently, Crockett (1988) reinforces what the investigators of II and VIS posit in terms of coping with CA in that positive thinking and planning have positive effects.

Imagined Interaction

Honeycutt, Zagacki, and Edwards (1989) distinguished between IIs and other cognitive processes by claiming that IIs "simulate communicative encounters" that individuals expect to happen or have experienced (p. 169). As a form of social cognition, IIs allow communicators to experience cognitive representations of conversations (both verbal and nonverbal) in a

realistic situation. Interactions with the self, where opposition within the self occurs, would also be included because a dialogue is taking place.

Measuring IIs has been done in a variety ways. The Survey of Imagined Interaction, which was developed by Honeycutt, Zagacki, and Edwards (1989), consists of Likert-type items that measure "frequency and occurrence, emotional intensity, content, roles of self and others, and function" (p. 172). Ethnographic means are also often used such as journal accounts and oral interviews. Through these types of measures, Honeycutt et al. (1989) have repeatedly found that IIs allow communicators to key into relevant and appropriate "verbal and nonverbal utterances" to attain goals, "thereby helping to alleviate communicative anxiety" (p. 180).

As shown earlier in the study of Wheeless and Williamson (1992), reducing uncertainty can occur by gaining information. If information cannot be obtained about a future speaking situation, for example, uncertainty may be reduced by attempting to guess what will happen. Rehearsing possible scenarios and outcomes assists in information gaining by allowing an individual to foresee the situation and consider the directions it can take.

Berger (1987) also discusses the role of uncertainty in communication and describes it as "a function of both the ability to predict and explain the actions of other and of self" (p. 41). Again, the implications of this for CAs is significant because as individuals employ cognitive processes, they are creating a familiar component to the reality that will later unfold. Berger (1987) further states that adaptation, which is only possible through reduced

uncertainty, is essential for survival. Most important is that this can be accomplished by internal processes.

Edwards, Honeycutt, and Zagacki (1988) conducted a study to examine the role of II as an element of social cognition, particularly its role in message selection and interpretation. A questionnaire was developed to "examine occurrence and characteristics of imagined interactions, as described by individuals who experience them" (p. 28). The resulting instrument was a combination of 21 statements to which subjects could respond on a 7-point Likert-type scale, and open-ended questions about personal imagined interactions. It was then distributed to 70 interpersonal communication students for voluntary completion.

Responses suggested that some people experienced more IIs than others. Additionally, functions varied from person to person. Rehearsal was the most reported function. Review was also commonly noted. Moreover, IIs were used to clarify the thoughts and feelings of individuals, and to plan and measure social action and develop proactive attitudes (Edwards et al., 1988, pp. 40-42).

Honeycutt, Zagacki, and Edwards (1990) conducted another study to gain broader understanding of the components of II. A survey was distributed to 290 college students in an interpersonal communication course. The first part of it explained what IIs are, while the second part required responses to questions on a seven-point Likert-type scale. These questions were designed to determine the variables of this type of interaction. The third part of the survey asked students to list their partners, locations, and topics involved in the interactions, as well as to write samples

of dialogue from one. Lastly, subjects were asked to respond to questions that explored functions and their relationship to satisfaction.

Results showed that individuals saw themselves speaking more often than others in each interaction. They also initiated each interaction nearly two times as often as others. Discussion in the interactions was shown to revolve mostly around personal topics and most frequently with close and intimate partners.

The results of the above studies provide even more insight into elements of II and lay the ground work for further study, especially concerning the role of imagery in such interactions. The particular images produced in IIs may determine the effectiveness of the imagined encounter. Zagacki, Edwards, and Honeycutt (1992) conducted further research to determine if verbal imagery would "be more associated with self-dominance in imagined interaction than visual imagery" (p. 59). Completed surveys from the researchers' 1990 study were reexamined. This time, they were analyzed by devoting attention to the dialogue, and some answers to open-ended questions.

While nearly a third of the respondents reported mostly verbal interactions, a few reported primarily visual ones. The majority reported a combination of the two. Also discovered was that subjects experiencing mixed emotions had more frequent imagined interactions than those who were not. Negative emotions were manifested in interactions that allowed the self to be more in control, whereas positive emotions were associated with imagined interactions that occurred after the actual one.

Although one can conclude from this that emotion affects II, further research indicates that interactions can affect emotions and behavior. A study conducted by Gotcher and Edwards (1990) served to investigate communication and coping by "examining imagined interactions experienced by cancer patients" (p. 257). Because previous research in communication suggests a correlation between attitude or psychological well-being and being physically healthy, the theory that II could also help seems well-founded. Forty-eight cancer patients at a cancer treatment center completed surveys similar to the ones in prior studies. They were also given an opportunity to record IIs and the feelings produced from them.

Responses indicated that patients often used IIs to rehearse such actual interactions as sharing medical information with family, and questioning the doctor and medical staff. Gotcher and Edwards (1990) also concluded that these imagined dialogues, particularly positive, pleasant ones, led to less anxiety and more actual communication, which can in turn, lead to better coping strategies (p. 262).

Allen (1991) also recognized the importance of the rehearsal function of imagined interaction and studied it in terms of fluency and the selection of particular messages. Subjects were encouraged to rehearse mentally through imagined interaction for a speaking situation. Three pausal variables (silence, ah, non-ah) were also examined and were found to be more common if rehearsal had not taken place. This further supports the idea that rehearsal is significant not only in reducing ambiguity and uncertainty, but it may also enhance performance.

Honeycutt, Zagacki, and Edwards (1992) further examined the role of II in communication competence as well as its effect on an individual becoming more sensitized to conversation. Subjects were 131 undergraduate speech communication students who completed the survey of imagined interaction, a measure for conversational sensitivity, and an instrument that measures self-reported competency.

Honeycutt et al. (1992) found that "thought about conversations is related to enhanced sensitivity about interactions" (p. 153). It seems reasonable that the more time one spends reflecting on a particular encounter, the more attuned one will become to it. The only connection suggested by the study regarding competency prediction via II was that subjects whose imagined interactions were discrepant from their actual interactions reported less competence. Important to note from the study is that conversational sensitivity often occurs intrapersonally as opposed to interpersonally.

Rosenblatt and Meyer (1986) expanded the functions of II even further. While this essay in particular discusses the role of II within families, the information can generally be applied to other areas of communication because of its intrapersonal nature. Specifically, Rosenblatt, and Meyer (1986) state that II "aids in the clarification of thinking, in preparation for a possibly difficult interaction, and in dealing with opposing aspects of self" (p. 319). Applicable to a public speaking situation in which one feels apprehensive is that "internal dialogues may be crucial in the development and maintenance of definition of self and situation" (Rosenblatt and Meyer,

1986, p. 319). Especially if the self-talk is positive, individuals may better resign themselves to an apprehensive situation.

It has also been speculated that IIs can predict such measures of self awareness as locus of control, self-dominance, and emotional intensity. Honeycutt, Edwards, and Zagacki (1989) conducted a study to determine the accuracy of IIs in predicting such characteristics. Subjects were 290 introductory speech communication students who completed the Survey of Imagined Interaction.

Correlations between the variables showed that experiencing IIs with different people about different subjects is related to an internal locus of control. A game-plan of sorts can be prepared, which accounts for a feeling of control. Similarly, self-dominance was also related to control, as people who use IIs tend to imagine themselves talking more than the other. Probably also stemming back to control, frequent users of II report more satisfaction and pleasure from their encounters. The more rehearsed or prepared one feels in interactions appears to be positively related to the quality of the encounter for the individual, probably because of what Honeycutt et al. (1989) refer to as the "intrapersonal orientation towards controlling one's fate and outcomes" (p. 23). The implication this has for CA is clear in that the more control one has, the less there is to fear.

II appears to have very positive outcomes. Mental rehearsal allows speakers to anticipate responses and reactions of others. Speakers can then prepare certain communication behaviors. Similarly, individuals who replace negative self-talk with more positive comments such as "I'm going to speak confidently and effectively" may also adapt more to the situation.

This imaginary preparation helps to alleviate anxiety by facing what causes it, the fear of the unknown. One can conclude, then, that IIs can be useful in coping with CA.

Visualization

Another intervention that has been found to reduce levels of CA is the use of VIS. For this intrapersonal process to occur, subjects are often asked to relax and picture themselves successfully completing various phases of speech-giving or are asked to imagine themselves being as relaxed as a more polished, confident speaker.

Ayers and Hopf (1985) introduced the idea of reducing CA by incorporating VIS into the public speaking courses of 430 college students (p. 319). Subjects in 10 classes completed McCroskey's PRCA during the first week of classes. Half of the classes compiled a control group while the remaining half listened to a script which took them through the VIS process. The PRCA was redistributed after informative and impromptu speeches were given.

Results indicated that CA was lower among students who used VIS, and even lower among those who used it twice. The researchers noted that "other factors, like experience, are more powerful influences" but that "it appears visualization helps reduce speech anxiety" (Ayers and Hopf, 1985, p. 322).

The next study Ayers and Hopf (1987) conducted compared VIS with other means of reducing CA, specifically, rational emotive therapy (RET) and systematic desensitization (SD). Sixty-four students whose scores on the PRCA-24 indicated high CA were divided into four groups of 16. One

was a control group while the other three were exposed to SD treatment, RET treatment, and VIS treatment respectively. The SD treatment group learned "deep muscle relaxation and then imagine(d) themselves in fear producing communication situations until they (could) do so and remain relaxed" (pp. 237-238). The RET treatment group focused on irrational self-evaluations and thought of ways to counteract those thoughts. The VIS group imagined themselves being successful in a communication situation. Results of a post-PRCA-24 prompted the researchers to conclude that "these data indicate that visualization was as effective in reducing communication anxiety as either rational emotive therapy or systematic desensitization" (p. 239).

The importance of internal states prior to a speaking situation was further examined by Hu, Bostow, Lipman, Bell, and Klein (1992), who began with the premise that "speech anxiety is related to negative or positive thinking prior to giving a speech" (p. 1067). They further posited that positive thinking before visualizing a speech would reduce both anxiety and heart rate.

Thirty high CA students from two introductory psychology courses were randomly assigned to three groups (positive, neutral, and negative thinking) which met on two consecutive days. On the first day subjects were taped reading ten statements that were positive, neutral, or negative, depending on the group. The second day, subjects were instructed to visualize a particular speech-phobic scene until they were able to do so at will. While heart-rate was measured, subjects listened to the statements recorded the previous day. For each one, thirty seconds were given to reflect on the statement,

immediately followed by 15 seconds of visualizing the speech scene. After the subject indicated the level of fear felt, the experimenter moved on the next statement, repeating the cycle until all ten were completed.

Hu et al. (1992) confirmed in their analysis that engaging in positive thinking before visualization of a "phobic image was associated with reduction of both subjective speech anxiety and cardiovascular responses to that image" (p. 1071). Such confirmation also suggests that practicing a positive attitude toward an upcoming real public speech can also be a useful cognitive approach to reduce speech anxiety for speech phobics.

Ayers (1988) conducted a two-part study in which the first part reconfirmed the correlation between positive imagery and speech anxiety. The second part was conducted to determine if students using VIS felt more positively about speech-giving in addition to experiencing reduced anxiety. Eight public speaking classes participated, half of which employed the use of VIS. The Booth-Butterfield and Gould instrument, which includes a portion allowing students to write about their thoughts, was used to measure state anxiety and was given before and after delivery of an informative speech. Responses were indicative of lowered CA and a small but significant increase in positive thoughts among the students who were exposed to VIS.

The previously mentioned studies by Ayers and Hopf were questioned by critics who argued that extra-attention alleviated students' fears, not VIS. Therefore, the purpose of Ayers and Hopf's (1989) next study was to debunk that criticism. The PRCA-24 was administered to public speaking classes and 107 students with CA were used as subjects. Subjects were then divided into four groups. Two placebo groups employed the use of muscle

relaxation techniques and rational thinking procedures, while a VIS group listened to a script being read as they imagined themselves being successful on the day of speech. A control group participated in no exercises.

Post PRCA-24 tests were administered six weeks into the semester. Analysis showed that the placebo groups experienced decreases in CA, but not to the degree that the VIS group did. Extra-attention, one may conclude, does play a role in lowering anxiety, but VIS seems to be even more effective.

Ayers and Hopf (1990) conducted an additional study to "determine if visualization is effective in reducing CA levels as much as eight months after exposure"(p. 75). Subjects were 109 high CA students enrolled in public speaking courses who completed the PRCA-24 at the beginning of fall semester. Half of the subjects were then given a visualization script, trained how to use it, and asked to use it for all speeches. The remaining half was not exposed to VIS. The PRCA-24 was filled out twice more by subjects, at the end of the semester, and at the end of spring semester when the surveys were mailed. Results supported the hypothesis that a decrease in CA due to VIS is relatively long term.

Hopf, Ayers, and Colby (1994) further noted that VIS can be used to reduce CA in initial interactions as well. Sixty-six subjects were assigned to either a VIS, placebo, or control group and completed pre- and post-tests which measured CA and attraction. In all groups, subjects were paired with a stranger for a ten minute interaction and then separated. The VIS group was exposed to a VIS script for interpersonal communication, while the placebo group was given a short lecture. The control group had a 15 minute

break while the experimenter left the room. After the treatments, new pairs were formed and another ten minute encounter took place. Results revealed that VIS was not only associated with lowered CA, but also with increased social attraction. This suggests that VIS may be an effective intervention in all types of CA, not only public speaking.

Ayers and Hopf (1992) also examined VIS as a means of not only reducing CA as in all previous studies, but also as a form of enhancing speech performance. Fifty-four students whose PRCA scores indicated high CA were assigned to deliver a speech about their futures. The treatment of one VIS group was to be taken through the script described in earlier studies. Treatment of the second VIS group included taking students through relaxation techniques, imagining conversations with friends, and watching a video of a successful speech about which students were supposed to make a mental movie focusing on delivery. Control groups had no training.

All subjects were asked to complete Spielberger, Gorsuch, and Lushene's (1970) state CA measure while observers took note of any behavioral disruption for each subject. Treatments (or no treatment in the case of the control group) were once again executed and new speech topics were assigned. After delivering this speech, all subjects completed the state CA measure, the thoughts measure, and the PRCA, again in the presence of the observers.

Data showed that VIS is effective in reducing speech anxiety and enhancing performance. Both VIS treatments were effective "in reducing negative thinking, state CA, and trait CA" (Ayers and Hopf, 1992, p. 8).

Also found was that students exposed to performance VIS seemed more natural in their own deliveries.

One aspect of VIS (and also II) that is worth noting is that constructing such cognitions may come more easily for some than for others. Ayers, Hopf, and Ayers (1994) conducted research that examined whether or not one's ability to create images is related to the effectiveness of the intervention. For this experiment, performance VIS was used as a treatment. It differs from the VIS script in that modeling is also a factor. Subjects view a tape of a confident speaker and are asked to picture themselves in place of the speaker, drawing heavily on imaging ability.

Fifty-nine high CAs who scored above or below the mean on a mental imagery questionnaire served as subjects. They were then assigned to the control group, placebo group, or the VIS group. All subjects were asked to give a pre-test speech to a small group, after which they completed a thoughts measure and a CA measure. Exposure to the treatment included watching a video for the VIS group, a video lecture on mass communication for the placebo group, and a twenty minute break for the control group. After a second round of speeches, for which coders were brought in to observe behavior, tests were completed by the subjects again.

Ayers, Hopf, and Ayers (1994) found that "those exposed to performance visualization report lower CA, fewer negative thoughts, and appear less rigid than those in control or placebo conditions" (p. 10). However, they also found that although performance VIS is somewhat helpful to less vivid imagers, it is more beneficial for vivid imagers. Those

who are more inclined to create "mental movies" are also more likely to reap the benefits of such treatment.

VIS, as described in the research, seems to have a positive effect on lowering levels of CA. By visualizing themselves successfully executing speeches, high CAs can become more confident in their performances and possibly improve them. What seems most conclusive from the studies is that at the very least, apprehension levels as a whole will decrease.

The review of literature regarding CA, II, and VIS reveal relationships among these concepts. High levels of CA can produce negative results in the lives of those who experience it. Students with high CA may even choose simply to drop out of school rather than face classroom presentations. However, by preparing for high pressure communication situations (through II and VIS), individuals may lower their levels of apprehension.

Hypotheses and Research Questions

The general purpose of the current study is to determine if levels of CA will decrease when script VIS, performance VIS, or II are introduced and to compare the statistical data with an opinion survey about how students perceive the treatments. It differs from previous studies in that both quantitative and qualitative measures will be used and further, in that the three treatments have not been compared in a single study. Specifically, the following hypotheses and research questions will be tested:

H1: The use of script VIS will reduce levels of CA in students.

H2: The use of performance VIS will reduce levels of CA.

H3: Using II will reduce levels of CA.

R1: Will the performance VIS and the script VIS be equally effective?

R2: What are students' perceptions VIS and II?

R3: Do students attribute reduction in levels of CA to the technique they employed?

Determining the answers to these questions should reveal the degree of effectiveness of each technique to discover if findings are consistent with previous research. Further, the qualitative portion will suggest how valuable students perceive these interventions to be. This is important for future research in this area because these treatments can only be effective if viewed by students as valuable.

Chapter Two
Methodology

Subjects

Participants were students enrolled in nine sections of an introductory level speech communication course at Eastern Illinois University. Assisted by four other instructors, two sections were exposed to script VIS, two were exposed to performance VIS, two more were exposed to II, and the remaining three served as control groups. After the mortality rate factored into the study because of absences or drop-outs, a total of 150 subjects were used. All groups, with the exception of the control group, were exposed to the appropriate treatment one time during the class prior to the day speeches were to begin.

Script VIS.

Subjects exposed to script VIS were told what VIS is and that it could possibly help them feel more comfortable during their upcoming speeches. They were then asked to get comfortable and Ayers and Hopf's (1989) script was read to them (see Appendix A). Subjects were to visualize themselves doing what was being described in the script such as "You are feeling very good about this presentation and see yourself move eagerly forward." After exposure, subjects were told to use the technique any time they felt uneasy about their upcoming speech.

Performance VIS.

Subjects in the performance VIS group were shown a video of John F. Kennedy's acceptance speech at the 1960 Democratic Convention. Before watching it, they were given a handout explaining what VIS is and how it

could help them with their speeches (see Appendix B). The instructor went over the handout with the subjects. They were instructed to focus on how confident Kennedy appeared, and to try to picture themselves in his place, speaking just as confidently.

Imagined Interaction.

The II group was given a handout that was entitled the Imagined Interaction Exercise. The instructor went over this with them to explain what II is and how it can help them with their speeches (see Appendix C). They were told to imagine getting points of their speeches across in a conversation with friends. Further, they were told to imagine conversations with peers in which peers were very supportive or congratulatory before and after their speeches. Finally, they were instructed to substitute any negative thoughts about their speeches with positive ones.

Instruments

PRCA-24.

The PRCA-24, because of its proven validity, was used to measure CA levels (see Appendix D). Each student completed it twice, once as a pre-test, once as a post-test. It was administered to each of the ten sections of Speech Communication as a whole one week before informative speeches began, and again to each student immediately after his/her speech was delivered.

Self Report Instrument.

At the end of the semester subjects in the intervention groups completed a general questionnaire so that they could express their opinions about the techniques (see Appendix E). Questions were exactly the same for all three

groups with the exception of the word "visualization" being changed to "imagined interaction" for that group.

The first two questions of the survey were Likert-type statements about apprehension, to which students could express their level of agreement or disagreement about their apprehension levels. The third question asked students to indicate the degree to which they felt the technique helped them by placing a mark next to the corresponding statement. The remaining three questions were open-ended and space was given to allow students to express their first impressions of the technique, their present feelings about it, and whether or not they felt it should be used in introductory level speech courses.

Data Treatment

Comparisons were made between the PRCA-24 pre- and post-tests for each group and as a whole by calculating the differences to determine changes in levels of CA. T-tests were then run for the paired samples of each group to determine significance. ANOVAs were also calculated between the groups in order to determine significant differences among the groups. Mean scores were used in the case of missing data, unless more than three responses were omitted, in which case the survey was eliminated. Frequency of responses for each question was also noted. Analysis of the self-report instrument entailed calculating mean scores for the first three questions and a content analysis of responses for the open-ended questions. Only descriptive analyses were conducted for the post-treatment instrument.

Chapter Three

Results

Pre- and Post-Tests

As was noted earlier, various statistical tests were performed in order to determine changes in levels of CA. Scores were determined based on a scale ranging from -48 (lowest CA) to 48 (highest CA). As can be seen in Table 1, the pre-test mean scores for the control group, the script VIS group, the performance VIS group, and the II group were not significantly different from those for the post-test, with the exception of the control group. However, the significant difference in that group revealed that apprehension levels decreased after the speech, thereby supporting previous research suggesting that students become more comfortable with speaking the more they do it. More generally, there was not a great difference between pre- and post-tests overall. This is also reflected in the frequency distributions for each of the questions on the pre- and post-tests (see Appendices F and G).

Table 1. Means and Significance Tests

Group	Pre	Post	Diff. Mean	S.D.	$p<$
Control	-8.913	-11.6087	2.6957	9.131	.051*
Script VIS	-8.0541	-5.8919	-2.1622	8.852	.146
Perf. VIS	-12.9310	-13.5862	.6552	7.350	.635
II	-9.3947	-8.5526	-.8421	8.355	.538

*indicates significance

An ANOVA between groups, as shown on Table 2, revealed a significance level of $p < .06$; no two groups were significantly different at the $p<.05$ level. When levels of apprehension were shown to decrease, as in the performance VIS and control groups, it was not to a significant level.

Table 2. ANOVA results for groups.

Group	Mean	Standard Deviation	Standard Error
Control	-2.6957	9.1308	1.3463
Script VIS	2.1622	8.8522	1.4553
Perf. VIS	-.6552	7.3498	1.3648
II	.8421	8.3554	1.3554
Total	-.2067	8.6733	.7082

The null hypothesis was retained for all of the hypotheses. The data revealed levels of CA were slightly increased after being exposed to script VIS, but not to a significant level; thus, Hypothesis 1 is retained. This was also the case for H3, which posited that using II would decrease levels of CA. The null hypothesis was also retained for H2, which stated that performance VIS would decrease levels of CA. Although the use of performance VIS did slightly reduce levels of CA in this case, the data show that it was not to a significant degree.

In response to the first research question, which asks if script and performance VIS are equally effective, the ANOVA suggests that there is not

a notable difference. Although significance was not found in either group, the performance VIS increased levels minutely, while the script VIS seemed to have the same effect in the opposite direction. The remaining two research questions must be answered by examining responses to the self-report instrument.

Self-Report Instrument

Quantitative Analysis

Results from the self-report instrument are not congruent with the responses to the PRCA-24. Mean scores for the first two questions indicate that a majority of the subjects felt that they had become slightly less apprehensive as the semester progressed (see Table 3). Frequency distributions reinforce this (see Appendix H).

Table 3. Mean Scores for Questions 1-3 on Self-Report Instrument

Group	Apprehensive at Beginning	Became Less Apprehensive	Technique Helped
Script VIS	2.47	2.28	3.09
Perf. VIS	2.5	2.08	3.46
II	2.08	2.08	3.49
Total:	2.33	2.14	3.34

Key for first two columns: 1=strong agreement, 5=strong disagreement
Key for last column: 1=It was the greatest contributing factor, 5=It did not help at all. 6=I did not feel more comfortable throughout the semester.

The third column above indicates the mean scores representing the degree to which students attributed a reduction in anxiety to the technique. The third research question, then, can be answered that in this case, subjects felt that the technique they used helped reduce levels of CA about as much as other factors, or at least a little. It was less often cited as the greatest contributing factor or as helping a lot.

Qualitative Analysis

The second research question asks generally what student perceptions of the treatments are. These perceptions are clearer when broken down according to the specific question on the self-report instrument (see Appendix I). Responses to the question about first impressions of the techniques varied within each group. Many students replied with descriptions such as "lame," "dumb," "corny," or "weird" or that "it put me in a trance." Also reported was that "it wasn't me" or "I felt uncomfortable doing it." Other responses indicated that some subjects had been introduced previously to similar techniques, such as "I was familiar with it," "I had touched on it in high school," "used it in basic training and liked it" or "used in tennis-good idea." Other subjects commented that it "seemed logical because nervousness is mental," "was experimental and therefore useless," and that " it could give me a better outlook." A few reported not understanding it or not remembering it, while a few others thought it could have been "done differently." This variety of answers is representative of all the groups, each one consisting of skeptics, advocates, and "in-betweeners" that became so based on first impressions.

Question #5 asked subjects how they felt at the end of the semester (see Appendix J). Responses showed that some first impressions changed over the course of the semester. While some reported that "it didn't help," "I don't think it helped as much as I thought it would," "it's not necessary," or that it was "pointless," the majority of responses suggested acceptance. Responses such as "it helped" or "it's okay" were the most commonly noted. Other subjects went into greater detail with such comments as, "I can see myself doing good, then I feel like I will," "change from the norm-exciting," "helps me feel more relaxed and confident during a speech," "It does help and that surprised me," and "It made me more calm because I knew what I was going to say."

The last question, question #6, asked subjects if they believed the technique they employed should be used in introductory speech courses to lower levels of apprehension (see Appendix K). Of the 94 subjects who were exposed to an intervention technique and completed the questionnaire, 67 (71%) responded that it should be used in introductory courses. Some "yes" responses were accompanied with comments such as "It might help others more than myself," "the sooner the better," "maybe even more than one day of it," and "It can only help" or "It can't hurt." Others were conditional, such as "Yes, but use a less prominent speaker "(in the case of performance VIS), or "Yes, but it really depends on the person."

Negative responses were both general ("It doesn't work" or "Not everyone needs this") and specific. Remarks were also used to elaborate on "no" such as "Speaking in groups makes us less apprehensive," "Practice and

interest in topic help more," and "Not a lot of people will do it and it's difficult to tell if someone has done it."

There were also a few subjects who did not answer with a clear "yes" or "no" whose comments suggested ambivalence. A few examples of this were "It's up to the speaker," "For me it didn't help but it may help others," "probably" and "Good to introduce, but many would not use it."

Specific group results for all three of the open-ended questions are shown more clearly in appendices. However, overall responses indicate that students feel that although the technique to which they were exposed did not help everyone, it is worth introducing in a required speech communication course.

Chapter Four
Discussion

The results suggest a lack of support for each hypothesis. Script VIS (H1), performance VIS (H2), and II (H3), did not lower levels of CA for these subjects to a significant degree. The research questions respectively indicated that script VIS and performance VIS did not elicit notably different results (R1), that students perceive each treatment as helpful for some (R2), and that subjects felt that treatment helped lower levels of CA as much as other factors (R3).

According to the self-report instrument, students felt about the same way for all three of the techniques. Interesting to note is that some subjects in the performance VIS group felt that it was not beneficial because they were to compare themselves with JFK and even put themselves in his place. This point of view is understandable, and when one student wrote that the technique would be more effective if regular people were shown, it was a point well taken. However, other subjects expressed that it was useful watching the video because they could "see the right way." The performance VIS offered what the other two techniques did not--a form of modeling. The prominence of the speaker may inhibit VIS for some, but it may also encourage it for others.

Script VIS, on the other hand, focused on relaxation, which was also noted by subjects in many of the responses. Generally, this group also found the script technique to be slightly more helpful in becoming less apprehensive than other groups. This was indicated in the mean scores of their responses to the question about the degree to which they felt VIS

helped. Because the focus of performance VIS is on more of a modeling approach and the focus of script VIS is on relaxing, an instructor considering these techniques will want to decide which best fits the needs of the particular class.

Another notable finding was that most subjects who admitted that their intervention had not worked for them still thought it may be worth including in an introductory level speech course. The general feeling expressed by these subjects was that it may work for others and that it cannot hurt to try it. This is another factor instructors will have to consider when deciding whether or not to incorporate such interventions into lesson plans.

As mentioned previously, the results of the PRCA-24 are somewhat contradictory, not only to the self-reports, but also to what similar studies have suggested before. Data indicated that levels of CA were relatively low on the pre-test. This likely contributed to the contrary outcome of this portion of the study because in order for levels of CA to decrease, they must be at least somewhat high before intervention. Various other limitations within this study are other possible reasons for this incongruity.

Attendance

In order for the PRCA to be used for each subject, attendance was required on three particular days: the day of the pre-test, the day of the treatment, and the day of the speech and post-test. It was estimated that absenteeism accounted for a 15-20% loss of subjects from the beginning of the study to the end. Had this mortality rate been lower, results may have reached a level of notable significance. One-hundred and fifty participants divided into four groups was not enough for true patterns to emerge.

Contamination

Another problem with the PRCA-24 was that most subjects had previously taken it once, and twice in some cases, before it was administered to them for this study. Complaints were heard from subjects by instructors about having to take it again, especially by the time post-tests were to be completed. Such a frame of mind surely affected how participants responded on the survey. While subjects were encouraged to view it as "fresh" and to answer as honestly as they could, familiarity and apathy no doubt factored into their responses.

If the study were replicated with a larger sample size of subjects who had never before seen the PRCA-24, results might be more congruent with existing research. However, even with these limitations, the study revealed some very interesting information.

Implications and Future Research

Overall, while it was noted that limitations may have resulted in a lack of significant statistical results, the qualitative data suggests that there is some student support for cognitive related treatments to be introduced in class. A valid point was raised about not all students taking VIS or II seriously, especially when it is first introduced. It also seems, though, that when the interventions are explained and the use of them is encouraged, students may begin to see the value of them. First impressions differed noticeably from later ones. As the research suggests, there are some who will still "think it's a crock" and will probably not attempt to use such techniques. For those who do, however, and find that they help, these interventions may be well

worth the time it takes to introduce them.

Future research in this area should explore the effects of imaging ability on the success of such treatments by examining student descriptions about the pictures and words they create mentally. Student descriptions may also serve another purpose, as one subject mentioned that it is difficut to determine if someone has really used the treatment. Individuals who are more auditorially inclined might have more success with imagined interaction because of the verbal aspect, while visually inclined individuals may prefer one of the two types of visualization. Also, people who have a more difficult time creating images might do better with performance VIS because most of the "picture" is already formed for them. The PRCA-24 should continue to be used to determine changed levels of CA, providing the subjects have not previously been exposed to it. Research in this area will further enhance treatment for sufferers of CA. As more support for such cognitive intervention is generated, chances increase that students and others will begin to see the value of them.

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Appendix A

Visualization Script

Close your eyes and allow your body to get comfortable in the chair in which you are sitting. Move around until you feel that you are in a position that will continue to be relaxing for you for the next ten to fifteen minutes. Take a deep comfortable breath and hold it...now slowly release it through your nose (if possible). That is right...now take another deep breath and make certain that you are breathing from the diaphragm (from your belly)...hold it...now slowly release it and note how you feel while doing this...feel the relaxation fluidly flow throughout your body. And now, one more REALLY deep breath...hold it...and now release it slowly...and begin your normal breathing pattern. Shift around, if you need to get comfortable again.

Now begin to visualize the beginning of a day in which you are going to give an informative speech. See yourself getting up in the morning, full of confidence, looking forward to the day's challenges. You are putting on just the right clothes for the task at hand that day. Dressing well makes you look and feel good about yourself, so you have on JUST what you want to wear, which clearly expresses your sense of well-being. As you are driving, riding, or walking to the speech setting, note how clear and confident you feel, and how others around you--as you arrive--comment positively regarding your fine appearance and general demeanor. You feel thoroughly prepared for the task at hand. Your preparation has been exceptionally thorough, and you have really researched the target issue you will be presenting today. Now you see yourself standing or sitting in the room where you will present your speech, talking very comfortably and confidentially with others in the

room. The people to whom you will be presenting your speech appear to be quite friendly, and are very cordial in their greetings and conversations prior to the presentation. You feel ABSOLUTELY sure of your material and of your ability to present the information in a forceful, convincing, positive manner. Now you see yourself approaching the area from which you will present. You are feeling very good about this presentation and see yourself move eagerly forward. All of your audio visual materials are well organized, well planned, and clearly aid your presentation.

Now you see yourself presenting your talk. You are really quite brilliant and have all the finesse of a polished, professional speaker. You are also aware that your audience is giving head nods, smiles, and other positive responses, conveying the message that you are truly "on target." The introduction of the speech goes the way you have planned. In fact, it works better than you had expected. The transition from the introductory material to the body of the speech is extremely smooth. As you approach the body of the speech, you are aware of the first major point. It emerges as you expected. The evidence supporting the point is relevant and evokes an understanding response from the audience. In fact, all the main points flow in this fashion. As you wrap up your main points, your concluding remarks seem to be a natural outgrowth of everything you have done. All concluding remarks go on target. When your final utterance is concluded, you have the feeling that it could not have gone better. The introduction worked, the main points were to the point, your evidence was supportive, and your conclusion formed a fitting capstone. In addition, your vocal variety added interest value. Your pauses punctuated important ideas, and your gestures and body

movements were purposeful. You now see yourself as relaxed, pleased with your talk, and ready for the next task to be accomplished that day. You are filled with energy, purpose, and a sense of well-being. Congratulate yourself on a job well done!

Now--I want you to begin to return to this time and place in which we are working today. Take a deep breath...hold it...and let it go. Do this several times and move slowly back into the room. Take as much time as you need to make the transition back.

Appendix B

Performance Visualization Exercise

1. **What we're doing.** What you are about to experience can help you become more comfortable with giving your speech. Visualization is creating pictures in your mind, and in this case, the pictures you will be asked to create are of yourself giving your speech full of confidence and certainty.
2. **How it can help.** This exercise may not work for everyone. But the self-fulfilling prophecy can make a big difference in your confidence level (or lack of it) for your speech. So instead of picturing yourself blundering or losing your place, picture yourself in complete control of the situation, full of confidence and positive energy.
3. **About the video.** John F. Kennedy has been called one of the most dynamic presidents in recent memory. You will be watching his acceptance speech at the 1960 Democratic Convention. When you are watching him, notice how poised, relaxed, and confident he seems and how this lends to the overall effectiveness of his delivery.
4. This exercise does not come easily to everyone, but **really try** to visualize the following things. It can only help you if you participate.

    a) Instead of focusing on content, focus on Kennedy's mannerisms and voice. What does he do with them to exude confidence?

    b) After identifying what behavior demonstrates confidence, **begin to picture yourself** in Kennedy's place. Instead of seeing his face, see your own. See yourself speaking as easily and confidently as he does.

Again, don't get caught up in **what** he's saying, but **how** he's saying it. If you get off track start over and begin again. Try to maintain this for several

minutes or until you can see yourself comfortably and confidently in a public speaking situation.

c) From now until you deliver your speech, whenever you begin to feel a little apprehensive, close your eyes for a few seconds and visualize yourself again confidently giving your speech. Replacing those negative pictures with positive ones just may help you feel less nervous.

Appendix C

Imagined Interaction Exercise

Imagined interactions are when you run a conversation or communication situation through your head. Sometimes, it's done before a situation as a form of practice. Other times it can be used to reflect on a situation. Because it has been found that imagined interaction can be helpful in a conversational context, it is likely that it can help you be more prepared for your speech. Here are some suggestions:

1) AFTER constructing your speech, imagine conversing with friends and classmates about your topic. Since your speech is informative, yet presented in a conversational tone, you should be able to imagine getting your points across as if you were having an informal, stimulating discussion. Practicing getting those main points across will help you become more familiar with them and more confident in delivering them.

2) Imagine yourself in the classroom right before and right after your speech, having a confident, relaxed conversation with your peers. In both imaginary situations, imagine peers being curious about and interested in your topic, possibly asking you your personal opinions about it, or genuinely complimenting you for such a neat topic choice and/or a job well done.

3) When engaging in your own self-talk from now until you deliver your speech, make sure that you turn negative comments into POSITIVE ones!

Appendix D

PRCA-24

Please indicate your level of agreement or disagreement by marking whether you (A) strongly agree, (B) agree, (C) are undecided, (D) disagree, or (E) strongly disagree.

Also, please realize that this information will be used for an entirely different study than others you may have previously taken. So please view this survey as "new" and answer accordingly.

1. I dislike participating in group discussions.
2. Generally, I am comfortable while participating in group discussions.
3. I am tense and nervous while participating in group discussions.
4. I like to get involved in group discussions.
5. Engaging in group discussion with new people makes me tense and nervous.
6. I am calm and relaxed while participating in group discussions.
7. Generally, I am nervous when I have to participate in a meeting.
8. Usually I am calm and relaxed while participating in meetings.
9. I am very calm and relaxed when I am called upon to express an opinion at a meeting.
10. I am afraid to express myself at meetings.
11. Communicating at meetings usually makes me uncomfortable.
12. I am very relaxed when answering questions at a meeting.
13. While participating in a conversation with a new acquaintance, I feel very nervous.

14. I have no fear of speaking up in conversations.
15. Ordinarily I am very tense and nervous in conversations.
16. Ordinarily I am very calm and relaxed in conversations.
17. While conversing with a new acquaintance, I feel very relaxed.
18. I'm afraid to speak up in conversations.
19. I have no fear of giving a speech.
20. Certain parts of my body feel very tense and rigid when I am giving a speech.
21. I feel relaxed while giving a speech.
22. My thoughts become confused and jumbled when I am giving a speech.
23. I face the prospect of giving a speech with confidence.
24. While giving a speech, I get so nervous I forget facts I really know.

Appendix E

Self-Report Instrument

Social security # : _____
(This is strictly for coding purposes. Your responses are confidential.)

Please respond to the following questions:

1. I was apprehensive about giving speeches at the beginning of the semester.

1-strongly agree 2-agree 3-undecided 4-disagree 5-strongly disagree

2. During the semester I became less apprehensive before and during speeches.

1-strongly agree 2-agree 3-undecided 4-disagree 5-strongly disagree

3. Please indicate the degree to which you feel that visualization (imagined interaction) helped you feel more comfortable about speeches:

___1-It was the greatest contributing factor.
___2-It helped a lot, along with other factors.
___3-It helped as much as other factors.
___4-It helped a little. Other factors played a greater role in making me comfortable.
___5-It didn't help at all.
___6-I didn't feel more comfortable throughout the semester.

4. What was your FIRST impression of visualization (imagined interaction)? Why?

5. Please describe how you feel about visualization (imagined interaction) now, at the end of the semester:

6. Do you believe visualization (imagined interaction) should be used in introductory speech courses to lower apprehension levels? Explain your answer and feel free to make any suggestions regarding its use.

Appendix F

Frequency Distribution for Pre-PRCA-24

Question #	Response: 1	2	3	4	5
1	5	19	14	75	37
2	32	78	18	22	0
3	4	19	17	81	29
4	30	77	21	19	2*
5	8	39	26	61	16
6	19	82	23	24	2
7	4	38	24	66	18
8	21	68	26	33	2
9	8	65	33	37	7
10	4	23	26	77	20
11	1	34	21	76	18
12	13	69	33	34	1
13	2	35	20	70	23
14	28	73	22	25	2
15	11	12	96	31	0
16	31	92	12	14	1
17	20	66	33	29	2
18	1	15	11	94	29
19	3	24	26	71	25*
20	20	75	24	25	5*
21	6	27	31	69	17

Frequency Distribution (cont.)

Question #	Response: 1	2	3	4	5
22	12	47	33	54	4
23	15	47	39	37	9*
24	9	43	26	51	13*

*Those not totalling 150 were due to missing data.

Appendix G

Frequency Distribution for Post-PRCA-24

Question #	Response: 1	2	3	4	5
1	5	25	15	70	35
2	37	79	15	14	5
3	9	19	17	84	21
4	36	72	25	13	3*
5	5	33	28	62	22
6	25	66	28	27	4
7	6	35	28	60	21
8	22	67	25	33	3
9	18	62	33	33	4
10	1	29	16	81	23
11	0	27	26	79	18
12	21	66	30	31	2
13	2	37	18	69	24
14	25	76	15	30	4
15	1	19	11	93	26
16	30	91	12	15	2
17	25	68	34	22	1
18	2	14	19	89	26
19	8	25	27	56	34
20	26	74	14	29	7
21	12	29	23	60	26

Frequency Distribution (cont.)

Question #	Response: 1	2	3	4	5
22	16	42	40	44	8
23	15	62	31	32	9*
24	17	43	25	47	14*

*Those not totalling 150 were due to missing data.

Appendix H

Self-Report Instrument Frequency Distributions

Script VIS Group

Question #	Response: 1	2	3	4	5	6
1	8	9	7	8	0	NA****
2	2	21	3	5	0	NA
3	0	10	11	8	1	1

Performance VIS Group

Question #	Response: 1	2	3	4	5	6
1	7	8	3	7	1	NA
2	8	12	2	4	0	NA
3	0	5	8	9	4	0

Imagined Interaction Group

Question #	Response: 1	2	3	4	5	6
1	9	20	3	3	1	NA
2	11	18	2	3	2	NA
3	0	8	9	12	5	1

*Question one was on a five-point scale and stated, "I was apprehensive about giving speeches at the beginning of the semester."
**Question two was on a five-point scale and stated, "During the semester I became less apprehensive."
***Question three was on a six-point scale and stated, "Please indicate the degree to which you feel that visualization (imagined interaction) helped you feel more comfortable about speeches."
****Not applicable to this question.

Appendix I

Responses to Question #4 on Self-Report Instrument

(What was your first impression of the technique?)

Script VIS Group

Negative (11; 34.4%):

It's not going to help. Useless. That it was just mind games. Getting laughed at. Scared-I'm shy. Didn't think it would help. Didn't see how it could help. Stupid. I was skeptical. It's a waste of time. I didn't like it because it felt awkward at first. That it wouldn't work. It wouldn't help prepare for the actual thing. Thought it was a crock. That it was lame. Seemed kind of corny. Dumb.

Positive (13; 40.6%):

Liked it-knew I'd do well. I believe in mind over matter. I thought it was going to be helpful because it would make me more comfortable later. Thought it was a good idea to help us relax and realize there is a way to get through this class. I've done it before and liked it. I was familiar with it. Thought it could help. I figured it would work. I do it every day. Used it in basic training and liked it. That it was valuable to me. It was relaxing. Alright.

Other (8; 25%):

Seemed weird-it put me in a trance. I'd never heard of it. That it could be helpful if we would've done it differently. Thought it would help others but not me. Seemed like it would help but when you get up there it's still nerve-racking. I did it in high school. Something new for a change. No response.

Question #4 (cont.)

Performance VIS Group

Negative (13; 50%):

That nothing could make presenting a speech easier. It was rather weird and I didn't understand it. I thought it was a little strange and I felt uncomfortable doing it. Thought it was pointless and I don't need to visualize. It didn't mean much. I thought it was an experimental tactic that was useless. Kind of silly because I don't see how it pertains to me. I cannot picture myself being 1/3 equivalent to fill the man's shoes (JFK). Didn't seem like it would help. Not helpful because he's not me. Seemed far-fetched.

Positive (10; 38.5%):

Good-it helped me get a better outlook. Somewhat helpful. Thought it could be helpful in building confidence. It was logical and it could help because people get nervous mentally and visualization helps reduce that. Pretty good idea-I've used it in tennis to keep from choking. Can be useful because power of suggestion and self-fulfilling prophecies are effective. Great idea because we not only got to see confidence, but also characteristics needed to be confident. It helped me realize Kennedy was speaking in front of millions and we are in front of less than 15.That I should pay close attention to it because it's important.

Other (3; 11.5%):

I thought he did a good job (referring to JFK). Hard to imagine being in his place, but after practice it seemed to make me less apprehensive. No response.

Question #4 (cont.)

Imagined Interaction Group

Negative (12; 33.3%):

Waste of time. I was skeptical, didn't see how it could help. This is really stupid because I'd never heard of it and I didn't think it could work. Didn't think it would help because wasn't that different. Who sat down and came up with these things? I didn't understand how it could help. Scared to speak. Getting laughed at. Just mind games. Useless.

Positive (14; 38.9%):

Made me more calm. It seemed like it would work. I believed it would work because it made sense to me. You may get ideas for your speech. I believe whole-heartedly in mind over matter. It sounded cool. Good idea-I used it in acting in high school. That it would be helpful. It could be sort of helpful. It works-I've done it before. I liked it because I knew I could do well.

Other (10; 27.8%):

Things went the way I imagined. I've done it before so I wasn't surprised to do it again. Thought it would help some but not me. I don't remember it. No response.

Appendix J

Responses to Question #5 on Self-Report Instrument

(How do you feel about the technique now?)

Script VIS Group

Negative (4; 12.5%):

I still think it's a crock. I don't think it helped me as much as I thought it would. You can't prepare for all that could go wrong. It's not as helpful.

Positive (24; 75%):

Helped make the class exciting. Helped a little bit. It can really help you give a better speech. It was relaxing. It made me comfortable and relaxed. I think it should be a part of all speech classes. I feel it's an essential part of speech delivery. It can benefit me. It could improve skills. I still like it. It helps a lot because I see myself doing well and feel like I will. It's okay. I find myself doing it before speeches now. It helped and showed from beginning to end. It helps not only in speech class but in everyday life. It was a great idea. I do feel more comfortable now. It works. I feel more at ease during speeches.

Other/ambivalence (4; 12.5%): I didn't really use it. It's an okay technique but won't work for everyone. No real feelings about it. No response.

Performance VIS Group

Negative (3; 11.5%):

I still think it's pointless. It's hard to put yourself into a category with someone you idolize. Personally, it didn't help me and I do not feel it is a necessary technique.

Question #5 (cont.)

Positive (18; 69.23%):

Helps me feel more relaxed and confident during a speech. Helps out a lot. It helps because you see someone give a speech. I will use it more. It's a very useful tool. It can benefit students in many ways. Can do it to give a good speech. Visualization has helped me and my classmates. I don't think it's that bad of an idea. I've noticed a significant increase in comfort. It does help and that surprised me. It helps people actually see what is right. It's very good.

Other/ambivalence (5; 19.23%): It is a little helpful, but it was really hard to imagine myself giving a speech like that. I can visualize looking at a large crowd. It only takes a couple of speeches to make me realize I can be confident, too. I tried to imagine myself in his place, but would rather speak as I usually do. No response.

Imagined Interaction Group

Negative (3; 8.3%):

I really don't think too much about it. It wasn't useless, but it didn't help me with my speech. I don't think it helps.

Positive (24; 66.7%):

I guess it works a little. I feel it works a lot. It's recommendable. I think it's a good thing to do. It helped me feel less nervous because I pictured myself doing a good job. It has worked for me. It's good-it can't hurt you. It's useful. It helped me tremendously. It helped me calm down somewhat.

Question #5 (cont.)

It helped me relax. It's something I will use for the remainder of my speaking career. I liked it and will try it again. Helpful to a certain extent. It was worth doing.

Other/ambivalent (9;25%):

No response. It's beneficial for some, uncomfortable for others. I don't really remember.

Appendix K

Responses to Question #6 on Self-Report Instrument

(Do you think it should be used in introductory speech courses?)

	Yes	No	Other*
Script VIS Group	24 (75%)	3 (9.4%)	5 (15.6%)
Performance VIS Group	20 (76.9%)	5 (19.23%)	1 (3.8%)
Imagined Interaction Group	23 (63.9%)	4 (11.1%)	9 (25%)

*"Other" responses were ones that did not specifically say "yes" or "no" or were not answered. They were noted as follows:

For me it didn't help, but it may help others.

Might be good to introduce but many would not use it.

Probably.

Depends on the person.

I don't think it hurts, but I don't think it helps.

Should be up to the speaker.

No response.